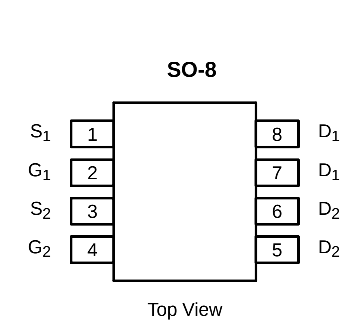
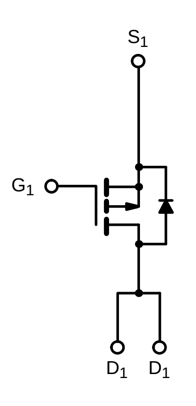


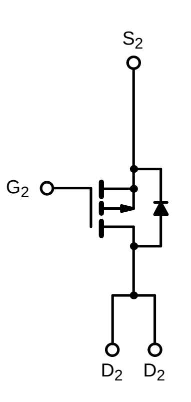
Dual P-Channel 20-V (D-S) MOSFET

PRODUCT SUMMARY		
V_{DS} (V)	$r_{DS(on)}$ (Ω)	I_D (A)
–20	0.075 @ V_{GS} = –4.5 V	± 3.4
	0.105 @ V_{GS} = –3.0 V	± 2.9
	0.115 @ V_{GS} = –2.7 V	± 2.6





P-Channel MOSFET



P-Channel MOSFET

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C UNLESS OTHERWISE NOTED)				
Parameter		Symbol	Limit	Unit
Drain-Source Voltage		V_{DS}	–20	V
Gate-Source Voltage		V_{GS}	± 12	
Continuous Drain Current (T_J = 150°C)[a]	T_A = 25°C	I_D	± 3.4	A
	T_A = 70°C		± 2.7	
Pulsed Drain Current		I_{DM}	± 16	
Continuous Source Current (Diode Conduction)[a]		I_S	–2.0	
Maximum Power Dissipation[a]	T_A = 25°C	P_D	2.0	W
	T_A = 70°C		1.3	
Operating Junction and Storage Temperature Range		T_J, T_{stg}	–55 to 150	°C

THERMAL RESISTANCE RATINGS			
Parameter	Symbol	Limit	Unit
Maximum Junction-to-Ambient[a]	R_{thJA}	62.5	°C/W

Notes
a. Surface Mounted on FR4 Board, t ≤ 10 sec.

For SPICE model information via the Worldwide Web: http://www.vishay.com/www/product/spice.htm

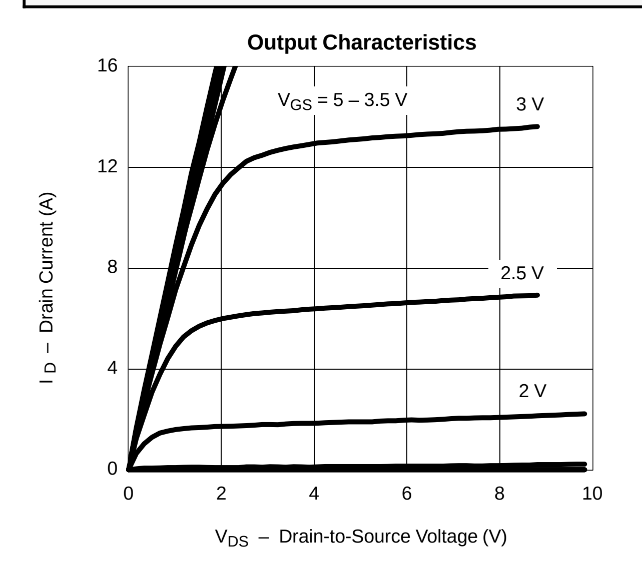


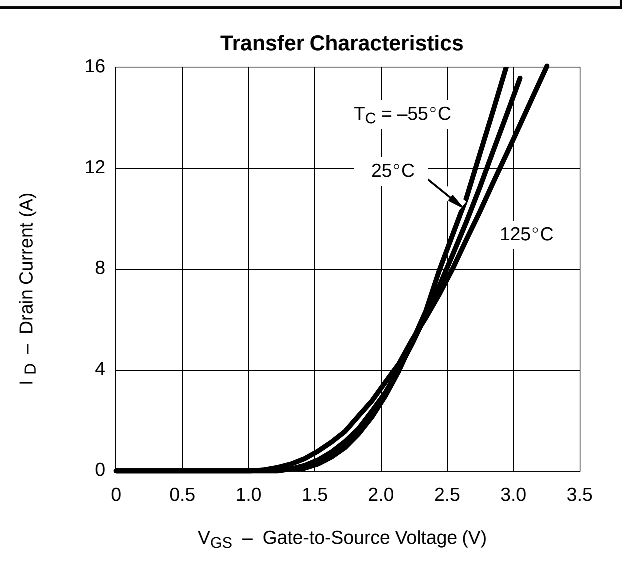
SPECIFICATIONS (T_J = 25°C UNLESS OTHERWISE NOTED)

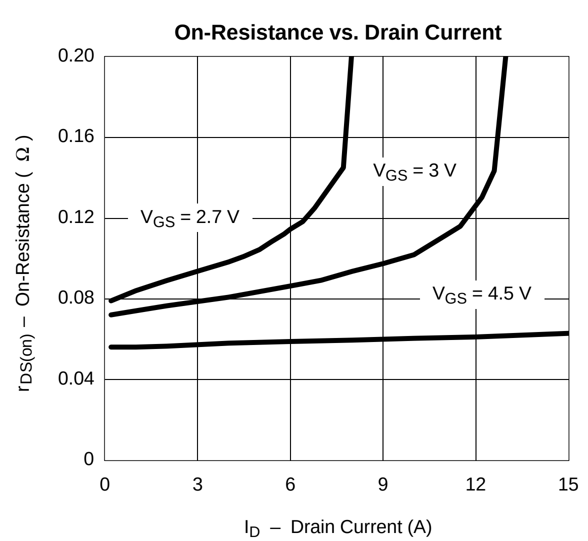
Parameter	Symbol	Test Condition	Min	Typ[a]	Max	Unit
Static						
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}$, I_D = –250 µA	–0.8			V
Gate-Body Leakage	I_{GSS}	V_{DS} = 0 V, V_{GS} = ±12 V			±100	nA
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} = –16 V, V_{GS} = 0 V			–1	µA
		V_{DS} = –10 V, V_{GS} = 0 V, T_J = 85°C			–3	
On-State Drain Current[b]	$I_{D(on)}$	V_{DS} ≤ –5 V, V_{GS} = –4.5 V	–16			A
		V_{DS} ≤ –5 V, V_{GS} = –2.7 V	–3			
Drain-Source On-State Resistance[b]	$r_{DS(on)}$	V_{GS} = –4.5 V, I_D = –3.2 A		0.06	0.075	Ω
		V_{GS} = –3.0 V, I_D = –2.0 A		0.078	0.105	
		V_{GS} = –2.7 V, I_D = –1 A		0.085	0.115	
Forward Transconductance[b]	g_{fs}	V_{DS} = –9 V, I_D = –3.4 A		8		S
Diode Forward Voltage[b]	V_{SD}	I_S = –2.0 A, V_{GS} = 0 V		–0.7	–1.2	V
Dynamic[a]						
Total Gate Charge	Q_g	V_{DS} = –6 V, V_{GS} = –4.5 V, I_D = –3.2 A		10	20	nC
Gate-Source Charge	Q_{gs}			2.1		
Gate-Drain Charge	Q_{gd}			3.3		
Turn-On Delay Time	$t_{d(on)}$	V_{DD} = –6 V, R_L = 6 Ω I_D ≅ –1 A, V_{GEN} = –4.5 V, R_G = 6 Ω		16	40	ns
Rise Time	t_r			46	80	
Turn-Off Delay Time	$t_{d(off)}$			40	70	
Fall Time	t_f			25	40	
Source-Drain Reverse Recovery Time	t_{rr}	I_F = –2.0 A, di/dt = 100 A/µs		60	100	

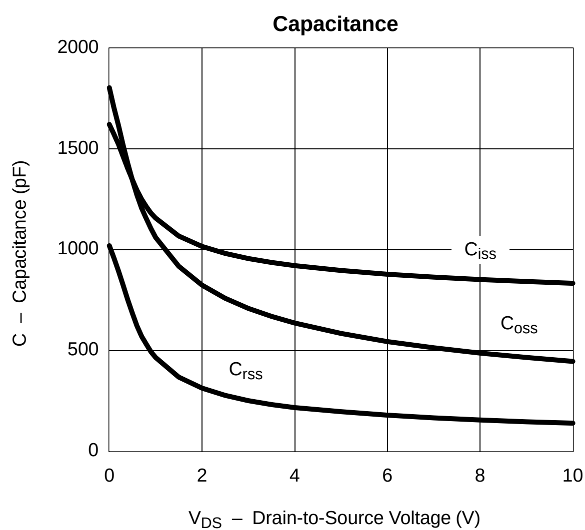
Notes
a. For design aid only; not subject to production testing.
b. Pulse test; pulse width ≤ 300 µs, duty cycle ≤ 2%.

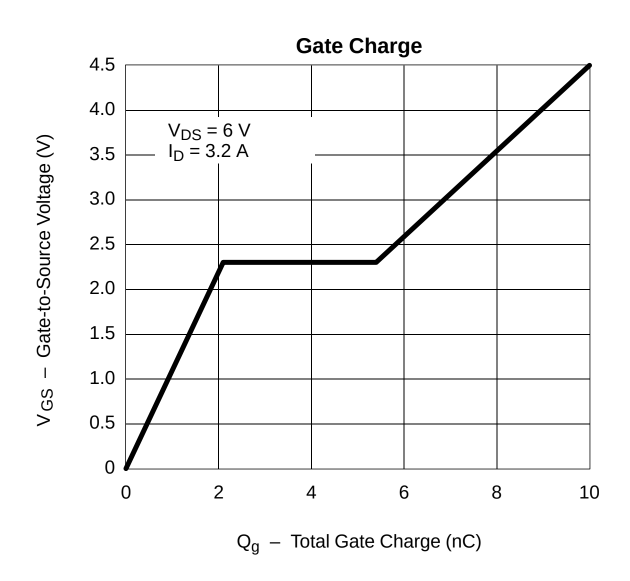
TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)

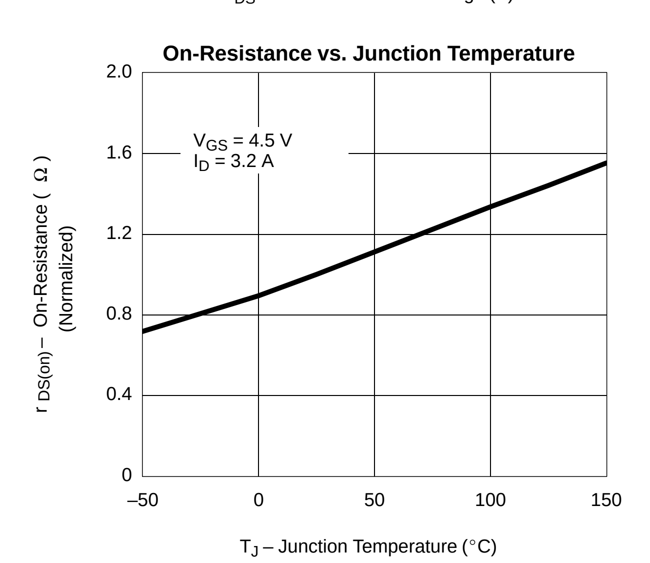






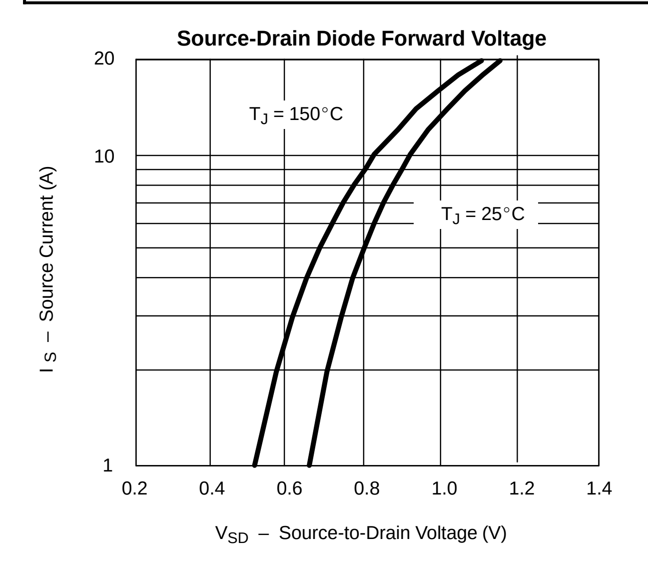


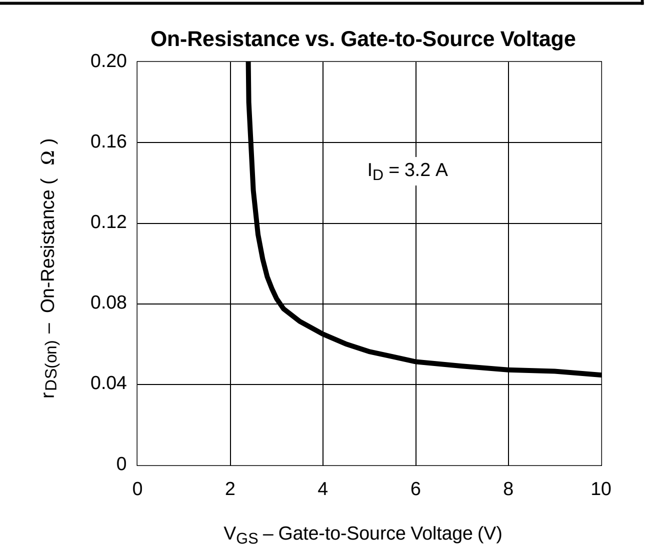


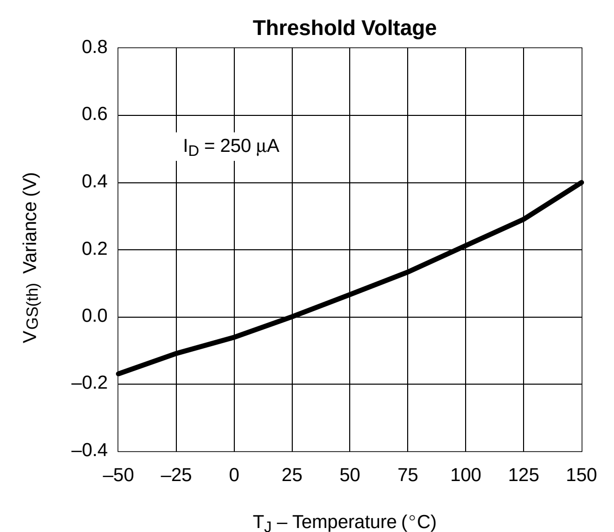


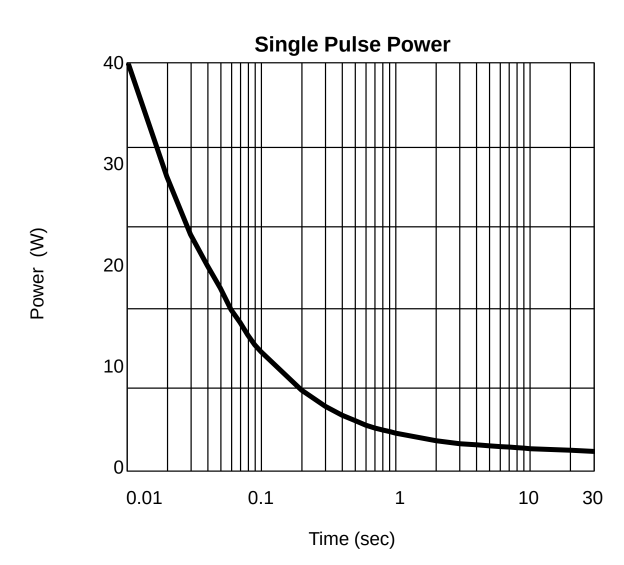


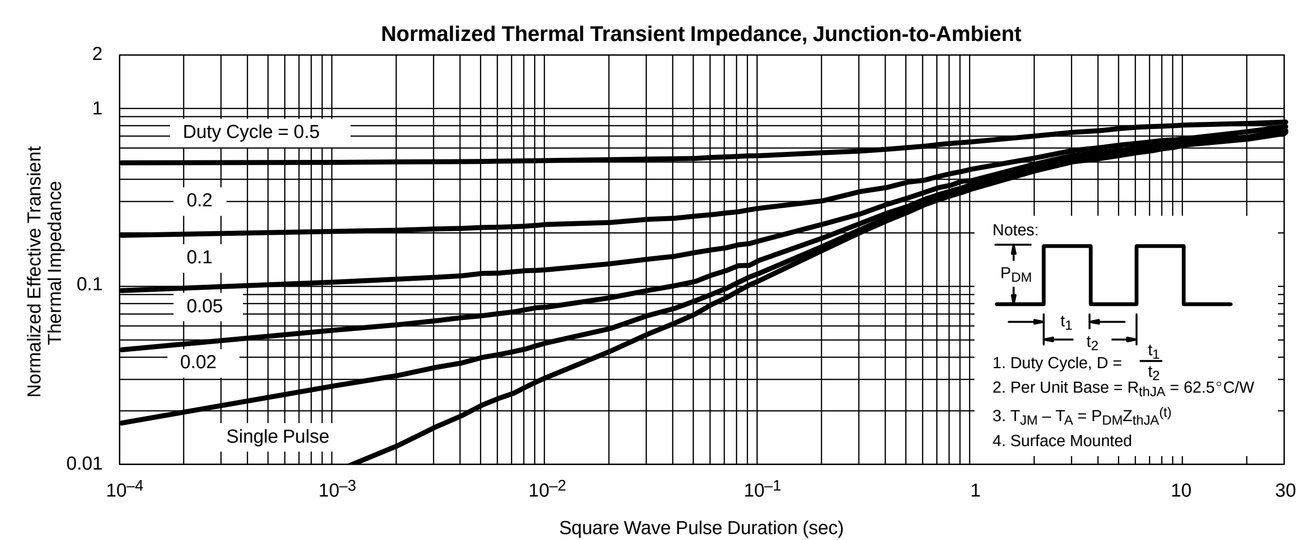
TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)











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